

REMARKS

Reconsideration of the present application is respectfully requested. Prior to this paper, claims 1, 3-5, 7 and 8 were pending in the application. This paper adds claims 15-20 in addition to the aforementioned claims. Claims 15-17 depend from claim 1. Claims 18-20 depend from claim 5 either directly or through claim 18.

Claims 1, 3, 5, and 7 are rejected under 35 U.S. C. § 103 (a) as being unpatentable over applicant's allegedly admitted prior art (in particular, the figures) in view of Usami et al. (Japanese Publication No. 10-056009) and Maex et al. (U.S. Patent no. 6,323,555). The examiner's contentions regarding the admitted prior art and the Usami reference were previously set forth in earlier-issued office actions. Maex et al., newly cited, appears to be relied upon by the Examiner in order to address the limitation added to claims 1 and 5 in the amendment entered in July, 2003, that is, that the SiOF insulating film is in contact with the wirings only at the wiring gap portion and is not in contact with the upper side of the wirings. We have carefully considered the teachings of Maex et al. and we do not agree with the Examiner's position.

As amended herein, independent claims 1 and 5 recite that "the second SiOF (interlayer) insulating film is in contact with both the first SiOF (interlayer) insulating film and the upper side of the wires" (emphasis added). This aspect of the present invention is neither disclosed nor suggested in each of the cited references, i.e. Applicant's Allegedly Admitted Prior Art, Usami et al. (Japanese Publication No. 10-056009) and Maex et al. (U.S. Patent No. 6,323,555).

The applicant observes that the newly cited Maex et al. reference teaches a metallization structure which is comprised of:

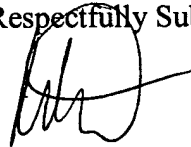
a conductive pattern;

a fluorine-containing dielectric; and

a barrier layer positioned between the conductive pattern and the fluorine containing dielectric. The fluorine-containing dielectric may be fluorinated silicon oxide. The barrier layer is a near noble metal such as cobalt, which also may be fluorinated. The barrier layer 7 is in fact deposited between the dielectric (SiOF) layers. This is a first distinction between Maex's teachings and the present invention, where the first and second SiOF layers are in contact with each other (see, e.g. layers 11 and 12 of Fig. 5). As indicated above, this aspect is now recited in claims 1 and 5. Secondly, there is no disclosure in Maex et al. that the fluorine concentrations in the respective dielectric layers 2 and 5 are different from each other, let alone higher at the wire gap portion.

Wherefore, based upon the foregoing, it is respectfully submitted that the claims are in condition of allowance, and a relatively early reply to this page would be greatly appreciated.

Respectfully Submitted,



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